

# Mini Remote Microphone

OPERATIONS MANUAL



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|--|----|
| Overview . . . . .                           | 4  |
| Basic Use . . . . .                          | 7  |
| Daily Use . . . . .                          | 9  |
| Wearing the Mini Remote Microphone . . . . . | 11 |
| Pairing with Hearing Aids . . . . .          | 12 |
| Using the Mini Remote Microphone . . . . .   | 14 |
| Start/Stop Audio Streaming . . . . .         | 15 |
| Assembling the Power Adapter. . . . .        | 16 |
| Troubleshooting. . . . .                     | 17 |
| Safety Information. . . . .                  | 19 |
| Regulatory Notices . . . . .                 | 22 |

Starkey Hearing Technologies Mini Remote Microphone is designed to stream remote microphone audio directly to your 2.4 GHz wireless hearing aids. When worn by a distant speaker in noisy environments, the Mini Remote Mic functions as an assistive listening device.

**Streaming** – Audio or sound transmitted wirelessly from the Mini Remote Mic directly to your hearing aids.

### Package Contents

- Mini Remote Mic
- Power Adapter
- USB-to-microUSB cable
- Operations Manual

### Optional Accessories

- Lanyard (part #91324-000)



1. Power Button
2. Status Indicator LED
3. Microphone
4. MicroUSB Jack
5. Clip

## Overview

### 1. Power Button

- Powers on and off the Starkey Hearing Technologies Mini Remote Microphone

### 2. Status Indicator LED

- Identifies the operational state of the Mini Remote Mic

| LED                | OPERATIONAL STATE        |
|--------------------|--------------------------|
| Off                | Power is off             |
| Slow Pulsing Green | Power is on              |
| Slow Pulsing Red   | Low battery condition    |
| Solid Red          | Possible fault condition |

### 3. Microphone

- Picks up speaker's voice during use

### 4. MicroUSB Jack


- Recharges via USB-to-microUSB cable

### 5. Clip

- Affixes Mini Remote Mic to clothing or lanyard

**Tip:** Stream Volume can be adjusted via the Thrive Hearing Control app, Starkey Hearing Technologies Remote, and/or hearing aid user controls. Review your hearing aid operation manual or contact your hearing professional for details on your particular system setup.

## Basic Use

- To turn on Starkey Hearing Technologies Mini Remote Microphone, press the power button for 3 seconds and release when the green LED appears.
 

The diagram shows a top-down view of the Mini Remote Mic. A red arrow points to a small rectangular button on the top surface. To the left of the button is a small green starburst icon representing the LED indicator. The number '1' is positioned below the device.
- Ensure your hearing aids are powered on.
  - **Note:** Prior to streaming audio for the first time, your hearing aids will need to be paired to the Mini Remote Mic. Refer to **Pairing with Hearing Aids** on page 12.
- To start audio streaming,
  - Open the Thrive Hearing Control app and select Start Streaming from Accessories screen.
  - Refer to **Start/Stop Audio Streaming** on page 15 for additional options.
- To adjust the stream volume, use the Thrive Hearing Control app, Starkey Hearing Technologies Remote, and/or hearing aid user controls.

5. To stop streaming, do one of the following:
- Turn off the Mini Remote Mic.
  - Open the Thrive Hearing Control app and select Stop Streaming from Accessories screen.
  - Refer to **Start/Stop Audio Streaming** on page 15 for additional options.

## Daily Use

### Power On

Press the power button for 3 seconds and release when the LED illuminates.



### Power Off

Press the power button for 2 seconds and release when the LED turns off.



### Battery Low

LED slowly pulses red. Provides an audible indicator tone to hearing aids every 5 minutes.

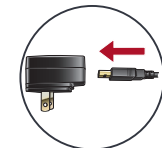


### Battery Recharge

Attach the microUSB end of the charging cable to the microUSB jack on Starkey Hearing Technologies Mini Remote Microphone.



Attach the USB end of the charging cable to a female USB jack on the enclosed power adapter.



## Recharging Status

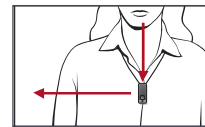
The Mini Remote Mic reaches a fully-charged state in less than 3 hours. It can reach a 50% charged state in about one hour.

| Power | Charge State | LED   |
|-------|--------------|---|
| Off   | Recharging   | Solid Green   |
| Off   | Complete     | Off   |
| On    | Recharging   | Solid green briefly interrupted by other LED status behaviors |
| On    | Complete     | Off   |

**Tip:** Recharging the Mini Remote Mic can take longer while streaming audio. Recharging will be faster when the Mini Remote Mic is off.

## Wearing the Mini Remote Microphone

Starkey Hearing Technologies Mini Remote Microphone can be affixed to clothing or worn on a lanyard. The Mini Remote Mic should be within 8 inches (20cm) of the speaker's mouth.

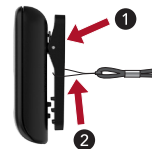


**Clip** – Press the clip as shown. Slide clip opening onto clothing and release clip. Ensure the Mini Remote Mic is securely affixed to clothing.



**Lanyard (optional)** –

1. Press the clip as shown.
2. Insert lanyard loop into clip opening and lift loop toward top of clip. Release clip. Ensure the lanyard is securely attached to the Mini Remote Mic.
3. Place lanyard around neck.



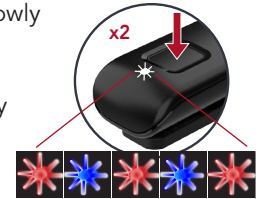
## Pairing with Hearing Aids

For Starkey Hearing Technologies Mini Remote Microphone to interact with your hearing aid(s), you must first pair the Mini Remote Mic with each hearing aid. You only need to perform this action one time, as they should automatically recognize each other when both are powered on and within wireless operating range.\*

To pair the Mini Remote Mic with your hearing aid(s):

1. Ensure your hearing aids are not connected to nearby Bluetooth devices. To do this,
  - Disable Bluetooth on your mobile phone.
  - Power off any nearby Starkey Hearing Technologies TV, Remote Microphone +, or Mini Remote Mic accessories, which you previously paired to your hearing aids.
2. Power off, then power on your hearing aids.
  - **Note:** For a CROS hearing aid system, power off both your hearing aid and CROS transmitter. Power on only your hearing aid, ensuring the CROS transmitter remains powered off.
3. Place your hearing aids within 6 inches (15 cm) of the Mini Remote Mic.

4. While the green LED is slowly pulsing, double-click the power button. The LED status indicator alternately blinks red and blue.



5. For a **set of** hearing aids:

| First LED blink | Second LED blink | Pairing Result              | Next Step          |
|-----------------|------------------|-----------------------------|--------------------|
| 1               | 2                | Both hearing aids paired    | Complete           |
| 1               | 2                | Only one hearing aid paired | Repeat steps 1 – 5 |
| 1               | n/a              | No hearing aids paired      | Repeat steps 1 – 5 |

6. For a **single** hearing aid:

| LED blink | Pairing Result | Next Step                |
|-----------|----------------|--------------------------|
| 1         | Successful     | Complete                 |
| 1         | Unsuccessful   | Repeat steps 1 – 4 and 6 |

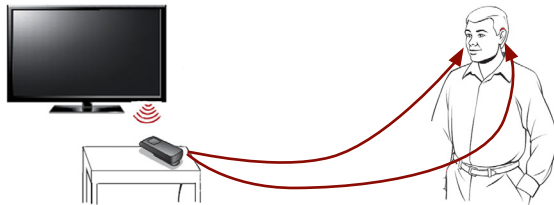
\*Typical operating range is up to 10 meters (~30 feet). Operational range may be reduced by environmental factors, such as obstructions, interference, and human body positioning. Larger operational distances are achievable, though audio quality and connectivity may decrease.

## Using the Mini Remote Microphone

In its primary usage, the Starkey Hearing Technologies Mini Remote Microphone is worn by a distant speaker in noisy environments. This allows a hearing aid wearer to focus on one person when background noise is present.




While not optimized as a general purpose omnidirectional microphone for tabletop use, the Mini Remote Mic may still provide benefit in some circumstances. For example, try placing the Mini Remote Mic near a television. To achieve a comfortable listening level, adjust the Mini Remote Mic distance from the television speakers or modify the audio streaming volume level.



## Start/Stop Audio Streaming

Audio streaming from Starkey Hearing Technologies Mini Remote Microphone may be started (or stopped) in a variety of ways:

- **Turn On the Mini Remote Mic:** Audio streaming automatically starts in hearing aid.
- **Thrive Hearing Control:** Open the App on your mobile phone or tablet. Select the option to start/stop streaming from Accessories screen.
- **Starkey Hearing Technologies Remote:** *If preconfigured by your hearing professional, press the*  *Favorite button.*
- **Hearing aid user control:** *If preconfigured by your hearing professional, a specific gesture (e.g. a Long Press on a user control) can start/stop streaming.*

Audio streaming will also stop when the Mini Remote Mic is turned off.

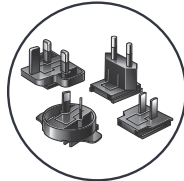
An audible indicator may play in your hearing aids to signal the start/stop of audio streaming.



## Assembling the Power Adapter

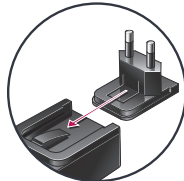
Starkey Hearing Technologies Mini Remote Microphone may include a variety of plug configurations for use in different countries. If the power adapter requires assembly:

1. Select the appropriate plug configuration used in your country.



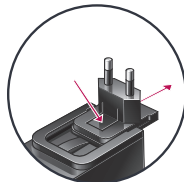
1

2. Slide the plug onto the power adapter until it snaps into place.



2

3. To remove the plug, press the tab and slide the plug away from the cable.



3

## Troubleshooting

| SYMPTOM   | POSSIBLE CAUSES   | SOLUTIONS  |
|---|---|--|
| One (or both) hearing aids unexpectedly drops out of audio streaming. | Hearing aids may be on the edge of wireless range.                  | Move closer to Mini Remote Mic.  |
|   | Battery level in hearing aid can no longer support audio streaming. | <ul style="list-style-type: none"> <li>• Replace hearing aid battery with new one.</li> <li>• Recharge your hearing aid, if applicable.</li> </ul> |
|   | Large object, such as furniture or a wall, may be degrading signal. | For best performance, your hearing aids should be within line-of-sight of Mini Remote Mic.   |
|   | Wireless connection with Mini Remote Mic was lost.                  | To restart the audio stream, follow steps in the <i>Start/ Stop Audio Streaming</i> section.   |
| Streamed audio quality is distorted.                                  | Low battery level in Mini Remote Mic.                               | Recharge Mini Remote Mic.  |
| Audio stream is too loud or too soft.                                 | Volume streamed from Mini Remote Mic to hearing aid not optimal.    | Adjust the stream volume via Thrive Hearing Control app, Starkey Hearing Technologies Remote, or hearing aid user controls.                        |
| Difficult to hear speaker in noisy environments.                      | Mini Remote Mic may be too far from speaker.                        | Move Mini Remote Mic closer to speaker's mouth.  |
|   | Mini Remote Mic may be covered by clothing or poorly positioned.    | Provide clear access from Mini Remote Mic to speaker's voice.  |

| SYMPTOM  | POSSIBLE CAUSES                                      | SOLUTIONS  |
|--|--|--|
| LED is slowly pulsing green, but no streamed sounds are heard in the hearing aids. | Hearing aids are not ready to receive audio streams. | To start the audio stream, follow steps in the <i>Start/ Stop Audio Streaming</i> section. |
|  | Hearing aids are not paired with Mini Remote Mic.    | Follow steps in <i>Pairing with Hearing Aids</i> section.                                  |
| LED is solid red.  | Possible error condition.                            | Turn off Mini Remote Mic, wait 30 seconds, and then turn it on.                            |

## Safety Information

### Required Information



Waste from electronic equipment must be handled according to local regulations.

### Instructions for Disposal of Old Electronics

Starkey Hearing Technologies encourages, and your local community laws may require, that your Starkey Hearing Technologies Mini Remote Microphone be disposed of via your local electronics recycling/disposal process.

The below instructions are provided for the benefit of disposal/recycling personnel. Please include this manual when disposing of your Mini Remote Mic.

### For Disposal/Recycling Personnel Only

This product contains a Lithium Ion Polymer battery. To remove this battery:

- Power off the Mini Remote Mic.
- Pry apart the housing halves with a small screwdriver.
- Cut the battery wires from the circuit board to prevent accidental shorting.
- Pry the battery away from the housing using a wide flat blade.

### Intended Use

The Mini Remote Mic is an accessory to a 2.4 GHz wireless air conduction hearing aid. It is intended as a wireless transmitter of sound from an audio source to air conduction hearing aids. When worn by a distant speaker in noisy environments, it functions as an assistive listening device.

The Mini Remote Mic is classified as a Type B applied part under the IEC 60601-1 medical instrument standard.

The Mini Remote Mic is designed to comply with the most stringent Standards of International Electromagnetic Compatibility. However, it is still possible that you may experience interference caused by power line disturbances, airport metal detectors, electromagnetic fields from other medical devices, radio signals and electrostatic discharges.

The Mini Remote Mic is designed to be cleaned with a damp cloth moistened with soapy water.

If you use other medical devices or wear implantable medical devices such as defibrillators or pacemakers and are concerned that your Mini Remote Mic might cause interference with your medical device, please contact your physician or the manufacturer of your medical device for information about the risk of disturbance. The Mini Remote Mic should not be used during an MRI procedure or in a hyperbaric chamber. The Mini Remote Mic is not formally certified to operate in explosive atmospheres such as may be found in coal mines or certain chemical factories.

## Use on Aircrafts

The Mini Remote Mic should not be used on aircrafts unless specifically permitted by the flight personnel.

## International Use

The Mini Remote Mic is approved to operate at radio frequencies that are specific to your country or region and might not be approved for use outside your country or region.

Be aware that operation during international travel may cause interference with other electronic devices, or other electronic devices may cause interference with your Mini Remote Mic.

Your Mini Remote Mic is designed to operate and be stored within the temperature range of -10°C (14°F) to 45°C (113°F) and relative humidity range of 10%-95%.

We are required by regulations to provide the following warnings:

**WARNING:** Use of the Mini Remote Mic directly next to other electronic equipment should be avoided because it could result in improper performance. If such use is necessary, note as to whether your hearing aids and the other equipment are operating normally.

**WARNING:** Use of accessories, components or replacement parts other than those provided by the manufacturer of the Mini Remote Mic could result in increased electromagnetic emissions and decreased electromagnetic immunity and could result in degradation of performance.

**WARNING:** If Portable Radio Frequency communications equipment is used closer than 30 cm (12 inches) from your Mini Remote Mic, degradation of the performance of your hearing aid could result. If this occurs, move away from the communications equipment.

Although the Mini Remote Mic is not formally certified (IP rated) for protection against dust or water ingress, per IEC 60529, it has been tested to the IP 5X level. This means that the Mini Remote Mic is protected from dust.

The battery in your Mini Remote Mic is not replaceable. Do not attempt to replace the battery. The Mini Remote Mic does not contain any user-serviceable parts. Do not open or modify it.

Do not connect the Mini Remote Mic to any devices not described in this manual. The expected service life of the Mini Remote Mic is 3 years.

## Wireless Technical Description

Starkey Hearing Technologies Mini Remote Microphone operates in the 2.4-2.4835 GHz band with a maximum effective radiated power of 8 dBm with transmission modulation type of GFSK with 2 MHz bandwidth. The receiver section of the radio has a bandwidth of 2 MHz.

The Mini Remote Mic has been tested to, and has passed, the following emissions and immunity tests:

- IEC 60601-1-2 radiated and conducted emissions requirements for a Group 1 Class B device as stated in CISPR 11.
- Harmonic distortion and voltage fluctuations affecting the power input source as stated in Table 2 of IEC 60601-1-2.
- RF radiated immunity at a field level of 10 V/m between 80 MHz and 2.7 GHz as well as higher field levels from communications devices as stated in Table 9 of IEC 60601-1-2.
- Immunity to power frequency magnetic fields at a field level of 30 A/m.
- Immunity to ESD levels of +/- 8 kV conducted discharge and +/- 15 kV air discharge.
- Immunity to electrical fast transients on the power input at a level of +/- 2 kV at a 100 Hz repetition rate.
- Immunity to surges on the power input of +/- 1 kV line to line.
- Immunity to conducted disturbances induced by RF fields on the power input as stated in Table 6 of IEC 60601-1-2.
- Immunity to voltage dips and interruptions on the power input as stated in Table 6 of IEC 60601-1-2.

## Regulatory Notices

FCC ID: EOA-24RMQ

IC: 6903A-24RMQ (Model 950)

### FCC/IC Notice

This device complies with part 15 of the FCC rules and with ISED Canada's license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

NOTE: The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.

### Note FCC/IC

Cet appareil est conforme à la partie 15 des règles de la FCC et avec les normes RSS de licence d'ISDE Canada. Le fonctionnement est soumis à deux conditions: (1) Cet appareil ne doit pas causer d'interférences nuisibles et (2) cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent causer des fonctionnements du dispositif.

NOTE: Le fabricant n'est pas responsable de l'interférence créée par la modification de cet équipement lors de l'écoute du téléviseur ou de la radio. De telles modifications pourraient entraîner la révocation de l'autorité de l'utilisateur à opérer cet équipement.

Hereby, Starkey Hearing Technologies declares that Starkey Hearing Technologies Mini Remote Microphone is in compliance with the essential requirements and other relevant provisions of Directive 2014/53/EU. A copy of the Declaration of Conformity can be obtained from the following addresses and from [docs.starkeyhearingtechnologies.com](http://docs.starkeyhearingtechnologies.com)

### Starkey Hearing Technologies

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Eden Prairie, MN 55344 USA



Wm. F. Austin House, Bramhall Technology Park  
Pepper Road, Hazel Grove, Stockport SK7 5BX  
United Kingdom



This device produces radio frequency energy. Interference may occur in the vicinity of equipment marked with the following symbol.



Class II device



Dispose of properly



Consult operations manual



